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Abstract

Sixty students began study in the fall, 1968, in a comprehensive pilot program for the professional education of teachers. Step 1, "Early Engagement and Awareness: Personal and Professional Decision Making," is a period of self-assessment, selected direct experiences, and interaction with teachers and occupational information. If the student decides that he wants to teach, he enters step 2, "Professional Knowledges and Skills," in which attention is given to foundational experiences including study of children, self and self-concept formation, human learning, and curriculum. Step 3, "Theory into Practice," utilizes the newer bridging approaches of analysis of verbal and nonverbal behavior, microteaching, and simulation as students continue to work in self-instructional self-pacing components. In step 4, "Professional Practice," they assume actual responsibilities as student teachers and interns. (Included are lists of content and process objectives; description of the 2-year development phase; description of the preparation and development of a self-instructional module; the original 1967 proposal including rationale and the model; a component description of "Educational Environment and Career Choice: Educational Psychology 1000"; the master design for evaluating the pilot program; and curriculum adjustment to accommodate the program--for majors in art, elementary, music, music, physical, and secondary education.) (JS)

ED033913

TEACHER PILOT PROGRAM

COURAGEOUS STEP

THE UNIVERSITY OF TENNESSEE

1969

PROPOSAL TO AACTE FOR

DISTINGUISHED ACHIEVEMENT AWARD COMPETITION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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SP003 290

Teacher Pilot Program Courageous Step

The initiation of the Pilot Program in Teacher Education by the College of Education must be hailed as a courageous step toward educational innovation at UT.

The program, which is the result of two years of faculty and administrative study, was begun this quarter in an attempt to reduce the number of education graduates who fail to enter the teaching profession and the number of students who leave the college before graduation.

THE 60 FRESHMEN who are participating in the pilot program will obtain experience and occupational information during their first year at the University to help them decide if teaching is the career they should pursue.

By getting a taste of the teaching profession as freshmen instead of waiting until the customary quarter of student teaching in their senior years, the students will be better equipped to choose or not to choose a career in education.

Donald L. Haefele, assistant professor of education, said the new program "may alter the whole professional aspect of the college's curriculum." He said it is hoped courses as a structured unit might be made more flexible in student participation and the number of formal class meetings.

ALTHOUGH WE acknowledge that work at curriculum rennovation is now taking place in other areas of the University, the College of Education's move toward making its courses more relevant to today's students and their problems should be eyed with envy by every other college at UT.

If this University is to prepare its students to take a commanding role of leadership in the 21st century, there should be other announcements soon from colleges and departments who are also up-dating and changing their curricula to keep in pace with the times.

Editorial, *UT Daily Beacon,*
October 15, 1968

I. PROGRAM SUMMARY

After more than two years of planning, a comprehensive Pilot Program for the professional education of teachers through grade twelve has been initiated by the University of Tennessee. Sixty students, randomly selected, began study under the new curriculum in the Fall 1968.

The curriculum for the Pilot Program is undergirded by assumptions about (a) characteristics and needs of college students and (b) preservice experiences. It utilizes newer technology and instructional alternatives including microteaching, systems of verbal and nonverbal behavior, and simulation. In addition, it is characterized by earlier direct experiences, utilization of behavioral outcomes as evaluative criteria, self-pacing instruction, and concern for self-awareness and understanding. (The complete model is presented in Figure 1.)

At the outset the student is expected to make an intelligent career choice following a period of self-assessment, selected direct experiences, and interaction with teachers and occupational information. Step 1 is called "Early Engagement and Awareness: Personal and Professional Decision Making." If the student, after careful deliberation and counseling,

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[1]Students receive either a pass or withdraw (P or W) in this component (Educational Psychology 1000). Those selecting to teach receive P while those deciding to enter another field withdraw with a W. Some students will be "passed" before one quarter expires; others may stay in this component for as many quarters as necessary.

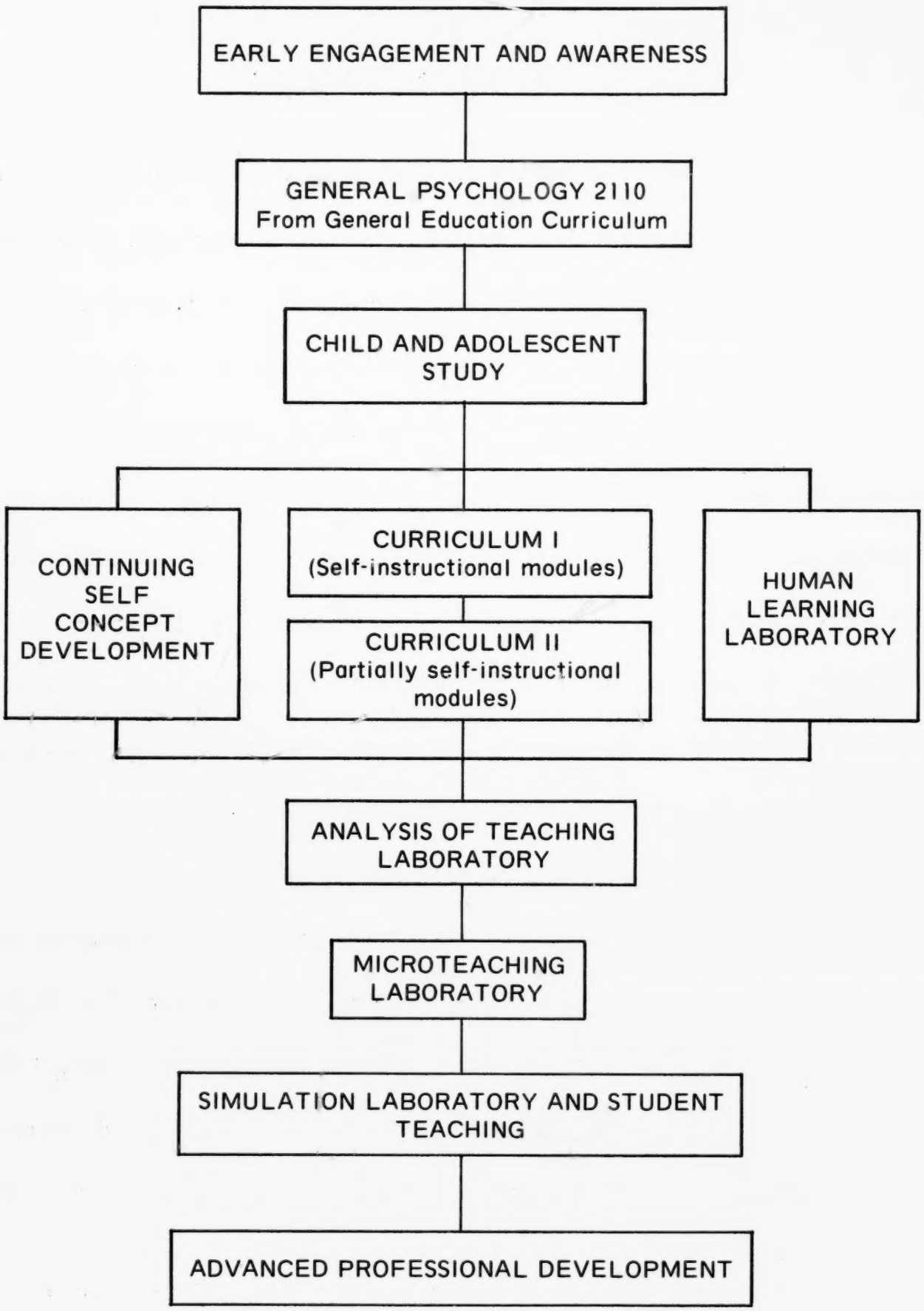

Figure I

Approximate Flow Chart of Pilot Program Experiences

decides that he does indeed want to teach, he enters Step 2 ("Professional Knowledges and Skills") in which attention is given to foundational experiences including study of children, self and self-concept formation, human learning, and curriculum.[2] Step 3 ("Theory into Practice") utilizes the newer bridging approaches of analysis of verbal and nonverbal behavior, microteaching, and simulation[3] as students continue to work in self-instructional, self-pacing components.[4] Step 3 merges with the earliest stage of Step 4 ("Professional Practice") in that students engage as teachers of an hypothetical, simulated classroom before assuming actual responsibilities in student teaching. As Step 4 continues, students as either student teachers or interns[5] function as team members in selected schools which can provide broad experiences with both advantaged and disadvantaged children. Throughout Step 4 the student will make direct application of experiences gained in preceding steps with particular

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[2]Each component (especially the last) is organized as much as possible on a self-instructional basis.

[3]Each component places heavy emphasis upon performance, interaction, and feedback.

[4]The development of self-instructional modules is described in Appendix A.

[5]Students will be assigned different amounts and kinds of responsibility and independence depending upon their individual levels of professional achievement and independence. Thus, some students as interns will function almost independently while others will be given more careful direction as in present student teaching settings.

attention to the application of skills developed in the human learning, analysis of teaching, and microteaching components. Finally, the University will attempt to provide follow-up contact with the graduate during his first year in order to ensure his continuing professional development and to obtain feedback for use in program modification.

Although several hallmarks of the Pilot Program are evident, perhaps the most unique are (a) the desire to recognize students as mature and independent individuals capable of self-direction and self-analysis and (b) the effort to guide them toward professional competence and satisfaction with teaching as a career choice.

II. PROGRAM ANALYSIS

Description and Development

Development of the Pilot Program in teacher education at the University of Tennessee began in May 1966 when Dean E. C. Merrill established a Committee on Experimentation and Innovation "to plan a comprehensive program in teacher education which stems from a rationale which is sound but somewhat different from the present program." The Committee, composed of representatives from all departments of the College of Education and the University's Director of Learning Research, began its task of model development in the summer of 1966 by formulating two sets of assumptions. The first had to do with characteristics and needs of

college students while the second set described professional curriculum experiences considered to be relevant for them (see Appendix B, pages 1-2). These assumptions formed the "what" and "how" (content and method) upon which the Pilot Program was constructed.

Each assumption about the curriculum undergirded the development of a component (or part) of the Pilot Program curriculum. (For example, the first assumption, "Students should be given an opportunity to determine personal and career goals such as (a) Do I really want to teach? (b) What do I want to teach to whom? (c) What kind of preparation program do I need?" was transformed into a component entitled "Early Engagement and Awareness.") By September 1967 the transformation of assumptions to operational programs had been completed and a "Proposal for a Pilot Program in Teacher Education at the University of Tennessee" was presented to the faculty (see Appendix B). Essentially the proposal contained (a) a model or paradigm, (b) assumptions undergirding the model's development, (c) a vertical organization of the experiences by steps, (d) projected role of the faculty, and (e) need for pilot program support. Following presentation of the model, reactions to the proposed Pilot Program were given by representatives of the College administration, faculty, and undergraduate students.

The second phase of program development began in late September 1967 when a new faculty Committee on Pilot Program Development and

Implementation was formed. Each committee member became chairman of an interdisciplinary subcommittee[6] responsible for the development of one program component, giving attention to both content and methodology. Consistent with the stated assumptions about college students and how they learn, each component of the program was to be characterized as fully as possible by self-pacing and self-instruction. In addition, component development subcommittees were charged with developing behavioral objectives, developing pre- and post-tests, permitting students to move into and out of the components as readily as possible and considering alternative systems of grading. It was proposed that each student upon entering a component be pre-tested and given a set of behavioral outcomes expected. He then would engage in experiences directly related to goal-achievement which would be individualized to a large extent. At any time the student felt he could perform the outcomes expected of him, he could take the post-test and, if passed, move to another component. (See Appendix C for an example of the initial and partial development of a component according to these criteria.)

A second activity undertaken during 1967-68 was the development of selection and evaluation procedures (see the following "Evaluation"

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[6]For example, the subcommittee on the Child Study component contained representation from the Department of Educational Psychology in the College of Education, the Department of Child Development and Family Relations in the College of Home Economics, and the Department of Psychology in the College of Liberal Arts.

section and Appendix D). In addition, attention was given to other problems such as recruiting Pilot Program staff, obtaining approval for substitution of the Pilot Program curriculum, seeking outside financial support, selecting the student sample, field-testing of selected components, and preparing faculty for Pilot Program assignments. It early became apparent that the Pilot Program would require special competencies of faculty members and steps were taken to provide for these needs. For example, three faculty members were sent to other institutions to become familiar with microteaching (a program component), equipment was purchased, and a Microteaching Laboratory established at a predominantly Negro elementary school in order to field-test microteaching with students and to train faculty members and graduate students in utilization of the technique. Another faculty member was recruited to develop and teach the component on "analysis of teaching." Two other faculty members became familiar with simulation materials and field-tested them in both regular course and student teaching settings. Finally, a full-time instructional materials specialist was employed to assist in the development of instructional or mediated materials.

Since the College of Education intended to initiate the Pilot Program on a trial basis in an experimental context alongside the current program, it was apparent that related costs for faculty, equipment, and supplies would entail expenditures in excess of the cost of operating the regular program.

Several attempts were made to secure financial assistance from foundations and from the Bureau of Research of the Office of Education. (In the latter case, the proposal submitted was out-of-phase with the request since program specifications had already been determined.) Ultimately, the entire cost of program development and implementation was borne by the University of Tennessee.

A critical event in the two-year study culminating in implementation of the Pilot Program was adoption of the new curriculum by departments within the College of Education and by the University Committee on Curricula. Since about 50 percent of the total College faculty had worked on development of the program, its support was established. The last formal progress report was made to the faculty on September 12, 1968 (Appendix F).

Participating students were selected randomly from freshmen entering the University in the Fall Quarter 1968. The first sample of thirty students entered the first component in September 1968. (The sample selection procedures are described in Appendix D, page 5.)

Objectives

The general objective was to develop and implement a model program in teacher training which is based upon a sound rationale about students and how they learn and takes into account the newest developments and technology available to teacher education. Specific objectives

(content and process) sought through the model Pilot Program include:

Content objectives. Each student enrolled in the Pilot Program will:

1. Make an informed career choice resulting from an analysis of recent occupational information and field experiences.
2. Outline the kinds of preparation he will need in order to become a teacher.
3. Have experiences with children who live in diverse social and economic environments including those with physical, emotional, or educational handicaps.
4. Learn about himself: his values and attitudes and the effects of these qualities on personal and professional behavior.
5. Know how children form self-concepts and how teachers can effectively alter a child's self-concept.
6. Know principles of human learning and apply them in planning and teaching.
7. Decide what to teach based upon broad understandings of the nature of curriculum and the nature of the child.
8. Know the values of alternative methods of organizing the school and classroom for instruction.
9. Know techniques for individualizing instruction in the classroom.
10. Use behavioral objectives in planning and evaluating instruction.
11. Employ valid processes for evaluating individual learning.
12. Demonstrate ability to do long-range and short-term planning incorporating knowledge of human learning, curriculum, and evaluation.
13. Locate and use supporting media and educational technology which permit improved teaching and/or individualization of instruction.

14. Apply the most up-to-date methodology and materials to his subject area(s) of specialization.

15. Understand and accommodate a greater diversity of student classroom behavior.

16. Plan and conduct "successful" parent conferences.

17. Apply "prescriptive teaching."

18. Develop satisfactory solutions to critical teaching problems reported by teachers.

19. Demonstrate approximately 18 technical skills which comprise the act of teaching.

20. Evaluate the effect of his verbal and nonverbal behavior on the behavior of children.

21. Have experience in team teaching.

Process objectives. The Pilot Program in Teacher Education will be characterized by:

1. Self-search and self-discovery: What does this mean to me as a person--as a teacher? What do my behavior and reaction reveal about myself? Use of newer technology will enhance personal assessment of teaching behavior.

2. Self-instruction: Opportunities to learn from self-instructional materials will permit each student to work at his own pace.

3. Independent study: Faculty members will be freed from summarizing material readily available in textbooks and have more time for student-faculty contact in tutorials or small seminars or for developing better reading lists or other relevant instructional materials. Thus freed from dependence upon classroom lecture, the student will learn to use and develop his personal learning resources.

4. Instrumental (direct) experiences: Students will be given maximum field, laboratory, and simulated experiences and will be

involved in schools and community agencies and directly with children representative of diverse backgrounds.

5. The utilization of behavioral objectives and assessment of performance: Each student will know exactly what behavior must be exhibited. At any time, he may ask to be assessed and if successful may be passed to another component.

6. Attention to behaviors rather than mere performance on paper and pencil tests: Assessment will pay attention to personal qualities of initiative, perseverance, creativity, leadership, and the like.

Personnel Involved

More than fifty University of Tennessee faculty members have been involved in some stages of the development and implementation of the Pilot Program. Two persons have been employed on a full-time basis solely for this purpose. During the implementation of the Pilot Program with freshmen in 1968-69, at least ten faculty members will serve instructional roles.

Primary responsibility for guiding and supporting development of the program rested with E. C. Merrill, Dean. Specific and detailed work carried on with the faculty was assumed early by Donald R. Cruickshank, Assistant Dean for Research and Program Development, and later shared with Mr. Donald Haefele.

Budget[7]

Personnel (assigned on a full- or part-time basis in developmental or instructional roles)	$ 55,600
Equipment and materials (includes purchase of videotape recorders, audiotape recorder, tapes, simulation materials)	12,400
Travel (to visit other colleges and attend professional workshops)	900
Total	$ 68,900

Contributions to Teacher Education

The development and implementation of the comprehensive Pilot Program in Teacher Education attest to the ability of a faculty of a college of education to accomplish a complete overhaul of its professional education curriculum and teaching-learning strategy. Most often, changes in teacher education programs are limited in scope and tend to be minor adjustments applied as a band-aid to a festering sore.

Aside from the "demonstration feature" of the Pilot Program, other special contributions to the field include:

1. Development of a program of early experiences and self-understanding which will enable entering students to make more realistic career choices and to develop a more immediate commitment to learning to teach.

2. Development of a continuing program designed to help prospective teachers know and understand themselves and how their

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[7]Major expenditures only, 1966-69. Not accounted for are secretarial services, duplicating costs, etc. which were shared with and by departments.

values and attitudes will affect the learning environments in which they teach.

3. Development of a Human Learning Laboratory in which students will learn and use basic principles of human learning applicable in the classroom.

4. Culling out elements of the curriculum common to all majors and developing self-pacing, self-instructional, and mediated modules in which each student may work at his own rate and according to his own time schedules. (This eliminates needless repetition of professional content in many courses.)

5. Development of a component, Analysis of Teaching, in which the student learns to assess the effect of his verbal and nonverbal behavior on the behavior of learners. (This development is a reflection of suggestions developed by the TEAM Project.) This component and others stress self-analysis and performance measures.

6. Institution of authentic micr oteaching laboratories in which students observe and practice elements of the teaching act. This teaching is done intentionally in schools serving disadvantaged students in order to insure such teaching contact. Very few authentic microteaching labs exist and most often children are brought to the college. In this case, the labs exist in public schools. They also serve an inservice function for teachers.

7. Use of simulation as an adjunct to student teaching in order to engage students in a threat-free but life-like teaching environment. The experience is intended to cause teachers to face teaching problems, to make decisions in teaching contexts, and to bear the responsibilities for resultant consequences.

8. Effort to differentiate assignments and responsibilities during student teaching. Focus, during student teaching, on the application of skills learned in Analysis of Teaching and Microteaching and in the Human Learning Laboratory.

9. Use of performance criteria (behaviorally defined) throughout. Each component is characterized by a set of behavioral objectives which are given the student at the outset of the study. Students may demonstrate required behaviors at any time. Thus individuals move through the program at their own rates.

10. Provision for follow-up of graduates to provide professional assistance and counseling and to obtain feedback to be used in program adjustment.

Hopefully, the Pilot Program and its elements will serve as incentives to others to build more adequately professional programs for tomorrow.

Evaluation

The overall evaluation of the Pilot Program was developed within the Bureau of Educational Research and Service of the College. Twelve major sources of experimental invalidity[8] have been minimized or controlled as much as possible through the adoption of the Solomon four-group design.[9] Evaluation of each component of the program is to be effected by the implementation of behavioral objectives as criteria. (A comprehensive explanation of the master design is included as Appendix F.) Each level of the program will be evaluated as students proceed through it and adjustments made before subsequent student samples are accepted.

Respectfully submitted,

E. C. Merrill

E. C. Merrill, Dean
Donald R. Cruickshank, Assistant Dean and Chairman, Pilot Program Development and Implementation Committee
Donald L. Haefele, Assistant Professor and Assistant Chairman, Pilot Program Development and Implementation Committee

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[8]Donald T. Campbell and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally, 1963), pp. 5-6.

[9]Ibid., pp. 24-25.

APPENDIX A

The Preparation and Design of a Self-Instructional Module

Some assumptions concerning our undergraduate students should be made at the outset of this paper. Evidence exists to support these assumptions as empirical generalizations, but its documentation should not be needed. These assumptions are:

(1) Students learn at different rates and in varied ways.

(2) Students are capable of being self-directed and self-propelling.

(3) Students can learn independently.

These assumptions support the efficacy of developing and implementing self instruction oriented modules. A module is a format incorporating an instructional unit. Students may spend varying lengths of time working individually toward the achievement of the instructional objectives in the module.

With the above as a rationale, let's outline a logical sequence to employ in module design. The assumption is made at the outset of this position paper that you have identified a specific area around which you are going to develop a module. A recommended procedure to follow in developing the module involves the following steps:

(1) Initially you should prepare a comprehensive list of your broad objectives. These objectives, or terminal goals, should encompass general concepts, understandings, knowledges, appreciations, etc., you wish each student to possess. In most instances, this will not be a simple task. If you have taught the material to be presented in this module, it will be worthwhile considering the intent of your examinations, papers or essays assigned, etc. The broad areas of interest, knowledge, problem solving, etc. you have stressed will provide the skeletal framework for more specific objectives to be sought later. Again try not to be too specific in this first stage of objectives delineation, but do attempt to identify these major short term goals.

(2) Now that the broad objectives of the module are specified, the next task will involve the following procedure:

(a) establish "behavioral objectives" from the list of objectives you now have. Simply stated, a behavioral objective is a statement describing what the student is expected to be able to do after instruction that he could not do before instruction.

For each objective, you should therefore specify what the student will be doing to demonstrate whether or not, and to what degree, he has achieved your objective(s). Do you want him to answer a certain number of questions correctly, recognize a correct or incorrect concept, state a principle, etc? These are examples of observable behaviors students can exhibit to demonstrate their achievement of your objectives. Objectives couched in terms of "to know," "to appreciate," "to understand," etc., are usually ambiguous to the student. He needs to know what behavior he must exhibit to demonstrate he has learned something. Therefore, if you want the student "to know" something, tell him what he must do to demonstrate he has this knowledge. Here is an example of a general goal: "The student will be able to communicate effectively in writing." This is a broad goal which can be found in most college statements of direction. Problems and differences of interpretation are inherent in the design of how to evaluate if the goal has been reached by each student. Each English instructor might differ as to how effective communication is to be interpreted. Instructional procedures could not be established with any assurity of direct relevance. Here are some examples of how the above goal could be stated as a behavioral objective:

(1) The student will write a descriptive essay of 500-1000 words on a topic to be assigned. or

(2) The student will write a 300-500 word description of the basic functions a secondary mathematics teacher performs.

The action to be taken by the student is specified. In each case, he is giving evidence that he can communicate effectively in writing and, in each case, the nature of the communication is specified in advance.

(b) Subsequent to activity a above, the careful specification of delimiting objectives should be undertaken. Thus, for each of your general objectives written earlier, you should examine the prerequisite behaviors your students will need possession of to attain each general objective.

For instance, what are the several abilities prerequisite to the student's writing a composition? One can think of dozens and each of them needs to be behaviorally defined as a separate task. Giving the student a set of prerequisite tasks, or objectives, will lead him to the desired end ability.

Here are a few examples of objectives designed to demonstrate abilities prerequisite to the task of writing an essay:

(1) The goal is that the student recognize appropriate titles:

Given a 500 word descriptive essay and eight titles, two of which may be considered appropriate to the essay, the student will select one of the two titles.

(2) The student must recognize the flow of ideas:

Given six paragraphs, the student will order them in sequence appropriate to form a coherent composition.

Ambiguity is absent in these objectives. The student knows the intent of a module or course incorporating them. There is no mystical talent needed to author such specific goals. It takes time, thought and persistent evaluation to produce a comprehensive list. Once it exists, you may only have to give it to the student and he will do the rest.

In summary, if you have progressed through steps a and b, you should have a list of broad behavioral objectives with a subordinate list of prerequisite behavioral objectives leading the student to the achievement of each of these broader objectives. Each objective whether general, or prerequisite to a general objective, should now be stated in terms of overt student behavior.

(3) With your behavioral objectives delineated, the next task is the establishment of performance standards. This involves the examination and specification of criterion levels of behavior for each objective. For example, in establishing an objective such as, "the student will plan a unit to teach children how to multiply two two-digit numbers," you would probably establish a number of performance standards. Some of these might be: "On a single typewritten page, the students will outline the unit content, utilizing two teaching methods and specifying at least three sub-objectives of the lesson." The "two" prefacing "teaching methods," and, the phrase "at least three," are performance standards or criteria for evaluating how well the individual student has attained your objectives. Performance standards let the student know what minimal levels of competence you expect him to attain. They also aid you in evaluating the individual student's performance. These performance levels are very behavioristic, but they are valuable in decreasing the ambiguity in the student's mind as to exactly what you want him to do and how well.

(4) Next, the learning activities for mastering the objectives should be arranged. The methods and supporting media you select may be varied. One means of helping the student in areas where his knowledge or skill is insufficient could be the provision of guide or resource sheets for inquiry activities. The acquisition or development of learning materials to facilitate individualized study will no doubt be necessary. Resource staff members will be available for consultancy in the developmental stage and at other levels to expedite the earliest implementation of the module. The following chart can help you to organize the module:

Broad Objectives	Behavioralized Specific Objectives	Prerequisite Objectives or Tasks	Learning Activity	Performance (Evaluation) Criteria

APPENDIX B

A PROPOSAL FOR A PILOT PROGRAM IN TEACHER EDUCATION AT THE UNIVERSITY OF TENNESSEE

Presented to the Faculty of the College of Education

September 14, 1967

by the Committee on Experimentation and Innovation

"The Committee on Experimentation and Innovation is to plan a program in teacher education which stems from a sound but somewhat different rationale from the present program." (Memorandum to the Faculty 5/4/66 from E. C. Merrill, Dean)

PREFACE TO THE REPORT

The Committee on Experimentation and Innovation in Teacher Education was formed during the 1965-66 school year. In an "Open Letter to the Faculty" (September 15, 1966), Dean Merrill stated,

> For two or three years now we have desired to design a truly experimental program which might provide the faculty with insights and ideas for improving programs of teacher education. . . The faculty should look forward to the kind of intellectual stimulation and perhaps discomfort that a new approach might require. Such a program will enable us to discuss important ideas, to test them, and to change our perspective on the important ingredients of a program in teacher education.

After many months of inquirey, deliberation, and discussion, the Committee wishes to submit the following proposal for a pilot program in teacher education. The proposal is not complete but we believe it is of sufficient scope and depth that it may become a basis for further reflection and decision making. The concept of teacher education presented here must continue to be evaluated and the content of the program further developed as a part of the demonstration. We are not presuming to state herein a complete or final teacher education program--rather we are projecting an alternative for consideration.

The Committee is sure that it will create both "stimulation and discomfort."

Committee: Carl Cox
S. C. Dietz
Robert Howard
E. C. Merrill
Ohmer Milton
Carl Murphy
Michael Nunnery
Robert Thurman
Fred Venditti
Helen Watson
Donald R. Cruickshank, Chairman

A MODEL FOR THE PRESERVICE PREPARATION OF TEACHERS

Step 1
Early Engagement and Awareness
Personal and Professional Decision Making

The Educational Environment

Designed to help prospective teachers (1) become aware of the diverse kinds of children attending public schools, (2) become acquainted with school and community services available to children and their families, (3) become acquainted with the likenesses and differences which exist among families, (4) make decisions regarding career goals and professional needs.

Step 2
Professional Knowledges and Skills

Study of Children	Study of Self and Self Concept Attitudes and Attitude Formation	Study of Human Learning	Study of Curriculum I
Designed to help students to understand children's behavior. Activities will include observations, case study, child supervision and seminars.	To acquaint the student with knowledge about himself, his attitudes, values, etc. How self-concepts are formed. Activities include study of selected children who are alienated, determination of causes of alienation and projection of courses of action available to help such individuals.	Designed to (1) investigate classroom learning including the identification of principles of human learning which should be applied to teaching, (2) provide an opportunity for the diagnosis and prescription of the learning needs of an educationally disadvantaged child.	Self-instructional modules designed to acquaint students with professional problems and alternatives. Topics among others will include (1) deciding what to teach (2) organizing for teaching (including alternative arrangements for teaching and classroom organization), (3) individualizing instruction and so forth.

Step 3
Theory into Practice

Microteaching	Simulation	Analysis of Teaching	Study of Curriculum II
A laboratory experience in which students teach abbreviated lessons to small groups of children practicing establishing set, questioning, closure and so forth. The microteaching component would be established in one or more public schools.	A setting in which preservice students would be engaged in developing alternative solutions to critical teaching problems presented in a simulated school environment.	A laboratory experience in which students study the effects of verbal and nonverbal influence on learner behavior.	Self-instructional modules designed to acquaint students with the more practical dimensions of teaching as (1) stating behavioral objectives, (2) lesson and unit planning, (3) evaluating learning, (4) teaching reading and so forth.

Step 4
Professional Practice

Student Teaching

Teaching experience as a team member in schools which provide a breadth of experience with both advantaged and disadvantaged children.

Step 5
Continuing Education in Teaching

Professional Development

Designed to provide continued university support for the first, second or third year teacher. College professional staff to assist in curriculum planning, evaluation, etc. as needed or requested.

General Education

COMMITTEE ON EXPERIMENTATION AND INNOVATION

August 8, 1967

College of Education
University of Tennessee
E. C. Merrill, Dean
D. R. Cruickshank, Chairman

A Proposal for a Pilot Program in Teacher Education

Introduction

This is a proposal for a pilot program in teacher education for The University of Tennessee. It has been developed by a committee representing the various departments of the College of Education and the Learning Research Center. The proposal has grown out of an interest on the part of the administration and faculty to design and implement a program which, among other things, takes into account promising new approaches to teacher education and changes in the social and educational environment of public schools.[1]

The pilot program is presented as an alternative to the present program. Initially the program would effect only a small number of students and faculty. Eventually, as it develops and according to faculty and student interest, it could become the program. At that time it is likely and healthy that it would undergo considerable modification or, in fact, displacement.

The model contained in this proposal must be considered eclectic. However, it is based upon more than just a chance juxtaposition of new ideas. This by itself would be only novel or interesting and not rational. A rational does exist and it is the intention of the proposal to present the program for scrutiny and criticism first by presenting some basic assumptions.

Assumptions Undergirding Pilot Program Experiences

In order to build the pilot program the following were accepted as assumptions or related beliefs about a preservice professional education program.

(1) Students should be given an opportunity to determine personal and career goals such as (a) Do I really want to teach?, (b) What do I want to teach to whom?, (c) What kind of preparation do I need?, and so forth.

(2) Students should become acquainted early with the social, educational and physical environments in which children live.

(3) Students should have opportunities to work with and to study the behavior of diverse kinds of children.

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[1] Most of the separate components of the pilot program are described in detail in professional journals and reflected in practice at various colleges and universities. Four model component prototypes have been selected for national dissemination by the American Association of Colleges of Teacher Education (AACTE).

(4) Students should become aware of their self and self-concept, needs, value system, and so forth.

(5) Students should be aware of how self-concepts of children are formed and may be altered.

(6) Students should discover principles of human learning and work toward their application in planning and teaching.

(7) Students should develop knowledge and skills related to (a) deciding what to teach (b) alternatives available for organizing for teaching and learning (c) individualizing instruction (d) preparing behavioral objectives (e) using valid techniques for evaluating learning (f) lesson and unit planning (g) locating and using instructional media (h) teaching specific subject content (i) handling student behavior (j) parent conferencing (k) innovative school practices (l) diagnosis and prescription of learning difficulties, and so forth.

(8) Students should develop specific teaching skills and have opportunities to practice such by teaching abbreviated lessons to very few children at first.

(9) Students should have opportunities to develop alternative solutions to critical teaching problems they will face as beginning teachers.

(10) Students should have opportunities to become aware of and to analyze their own teaching style(s) and to observe its effect on learners.

(11) Students should be given opportunities to plan and to teach in teams.

(12) Students should be provided professional assistance and/or on-the-job counseling for as long as needed after graduation.

Assumptions About Students

In addition to the above assumption about program content, additional assumptions are made about college students.

(1) That they wish to participate in planning personal and career goals.

(2) That they have different personal and professional needs.

(3) That they are capable of being self-directed and self-propelling.

(4) That they are capable of learning somewhat independently.

(5) That they learn at different rates and in unique ways.

The modification, rejection or acceptance of the above statements permits the further development of the model. Assuming their acceptance, certain experiences emerge which are considered as program components.

Organization of Program Experience

Vertically the experiences arising from the assumptions may be organized into five steps or stages as follows:

(1) Early Engagement and Awareness: Personal and Professional Decision Making

(2) Professional Knowledges and Skills

(3) Theory into Practice

(4) Professional Practice

(5) Continuing Education in Teaching

A brief explanation and description of each step and components within steps follows. An Appendix provides a more thorough description of a few.

Step 1 Early Engagement and Awareness. This step is designed to acquaint prospective teachers with the milieu of public education by (1) engaging them with children of diverse backgrounds and abilities (2) acquainting them with school and community agencies (3) and arranging meaningful contacts with parents and families. Students may serve as (1) teacher aids (2) guidance counselor aids (3) Community Action Program volunteers (4) family agency aids, and so forth. Among other things, as a result of this experience, students should be prepared better to make career decisions regarding (1) commitment to a career in teaching (2) certification desired (3) professional program needs, and so forth.

Step 2 Professional Knowledges and Skills. Here the student obtains information and ideas regarding theories of behavior, self-concept formation, human learning, and so forth. Step 2 consists of three somewhat self-contained components (1) The Study of Children, (2) Study of Self, Self-Concept, Attitudes and Attitude Formation, and (3) Study of Human Learning. These components are laboratory or experience centered. Each of the components would require variable time of from two weeks to two months. A fourth component differs in that it is composed of a set of self-pacing, self-instructional, multi-media learning modules. In general the modules will permit students to explore topics of general or special interest ranging from "Deciding What to Teach" to "Methods of Deaf Education." Typical classroom

curriculum courses and units thus would be available on an individually prescribed basis. Projected modules include:

--Deciding what to teach

--Organizing the school and classroom for instruction, including among other topics

Pupil team learning

Team Teaching

Non graded program

Flexible modular scheduling

--Utilization of newer instructional media

--Innovations in public education (teaching, curriculum, methodology, or other)

--Other

Step 3 Theory into Practice. Herein students would continue modular study moving into the more practical dimensions of professional study as planning, teaching, and evaluating. Modules would include among others

--Using behavioral objectives

--Planning the curriculum

--Providing for individual differences

--Analyzing student behavior

--Parent conferencing

--Teaching English, social studies, reading, science, and so forth

--Teaching the disadvantaged child

--Diagnostic and prescriptive teaching

--Other

At the same time, students would be engaged in three new components in which theory about learning, behavior, self-concept, and so forth, studied in Step 2 should be intentionally applied. The Step 3 modules are (1) Microteaching

which provides "scaled down" teaching experiences for novices where they may learn and apply specific professional skills as establishing set, establishing appropriate frames of reference, achieving closure, questioning or other, (2) Simulation which provides a setting in order to engage students with the critical teaching problems they will face in classrooms, and (3) Analysis of Teaching where students will be given opportunities to practice a variety of teaching styles and to observe the effect of verbal and nonverbal behavior on children. As mentioned previously, transfer of training from Step 2 to 3 would be emphasized.

Step 4 Professional Practice. The student teaching stage would be altered by (1) establishing procedures where students would plan, teach, and evaluate in teams, (2) employing analytic techniques to study teaching behavior and its effect upon student response (application of Analysis of Teaching Component), and (3) ensuring student teacher contact with a variety of learners both advantaged and disadvantaged.

Step 5 Professional Development. During the graduate's first, second, and third year, the college would maintain a professional counseling relationship assisting with classroom related problems.

In essence the pilot program may be characterized by the following:

(1) Early engagement of students in the social and educational environment of children with resultant opportunity for personal and professional decision making.

(2) Introduction of the use of self-pacing, self-instructional modules permitting students to work at their own pace and permitting faculty members more time for individual counseling and/or seminar experiences.

(3) Introduction of laboratory experiences which focus on promising new approaches to teacher education. Emphasis upon engagement and problem solving.

(4) Introduction of a team and analytic approach to student teaching.

(5) Acceptance of college responsibility to graduates during their probationary period in public schools.

Role of the Faculty

The pilot program will create a somewhat different role for a faculty member. Among other things, he will (1) be actively involved in the creation of new instructional systems (modules) employing newer media and combining desirable elements of programming, individual conferencing,

seminars or other, (2) work toward the development and implementation of new laboratory experiences which may be largely public school oriented and based, (3) establish a close counseling relationship with students in the pilot program in order to assist them with decision making and to encourage their rapid professionalization, and (4) establish more tutorial and seminar relationships.

Support for the Pilot Program

Although program or course development is an accepted responsibility if not the core of a faculty member's role, it is incumbent upon the college to provide specialized assistance and other forms of support. Therefore some appropriate supporting faculty have been recruited and are available to help in module or laboratory development. In addition, foundations are being contacted which may have interest in such a pilot venture.

Tasks Ahead

The most formidable and immediate problem confronting the committee is the acceptance, development, implementation, and evaluation of the pilot program. One department already has held a special meeting to investigate the proposal, has endorsed it and indicated a real willingness to participate. Immediately other departments should discuss the plan and the part they may wish to play. A Committee for Pilot Program Development and Implementation should be formed. Hopefully, it will be composed of faculty members who accept the pilot program rationale, and believe it may be designed to increase student competence.

Another significant problem is the determination of college credit to be given for each experience in order to meet certification standards. Other problems involve budget and student selection.

Several subcommittees of the Committee on Experimentation and Innovation have worked to consider preliminary aspects of establishing certain steps and components. Attached are elaborations of such indicating possible objectives and activities. These preliminary sketches are provided for the guidance of those who may work on the Committee for Program Development and Implementation.

APPENDIX

Early Engagement and Awareness
Personal and Professional Decision Making

Objective 1

Students would become aware of the kinds of children attending public schools.

-mentally retarded

-physically handicapped

-brain injured

-speech impaired

-hard of hearing

-visually impaired

-normal

-very bright

Students will become aware of the characteristics of some of the above children and of special programs designed to meet their unique needs.

Activities May Include

-visits to schools with unique programs: observations, seminars with public school and college faculties

-use of TV tapes to record and bring to campus special programs in more distant schools

-as teacher aids in special and regular classes

-development and discussion of case studies e.g. typical and atypical child

-as tutors (team approach) working with special children

-as assistants in school or community clubs or service agencies

Objective 2

Students will know of school services available to children and how they may be employed.

-guidance and counseling

-psychological services

-testing program

-remedial reading

-speech correction

-health

Activities May Include

-visits to pupil personnel offices and to specialists in schools

-use of TV tapes to present work of specialists

-as aids to counselors, psychologists, speech and hearing improvement personnel, etc.

Objective 3

Students will know of the likenesses and differences which exist among families of children attending public schools.

Activities May Include

-visits with families associated with objective 1 (parents of exceptional children)

-visits to family agencies

-service as aids in family agencies

-observation of parent conferences in schools

-development and discussion of a family case study

Objective 4

Students will know of community services available to families and the school and how they may be employed.

Activities May Include

-visits to service agencies

-as aids in community service agencies including community action programs

-through seminars with community service personnel

Objective 5

As a result of Objectives 1-4, students will be able to make personal and professional decisions regarding

-interest in teaching

-area of interest

-program needed to meet unique needs

Activities May Include

-seminars, individual conferences with faculty

-resource persons

Instructional role of faculty member working in Component One

(1) Program planning and coordination

(2) Orientation and assignment of students

(3) Supervision of students in program

(4) Conduct of seminars and individual conferences with students

(5) Supervision of tutorial programs

(6) Creation of special materials as TV tapes

(7) Program evaluation

Additional staffing necessary

(1) Doctoral assistants assigned to program

Other needs

(1) Identification of schools and agencies who would cooperate in program

(2) Transportation

(3) Time blocks

(4) Role clarification

(5) Allocation of staff

(6) Description of minimal standards

(7) Financial support for above

APPENDIX

Professional Knowledge and Skills
The Study of Human Learning

Objective 1

Students will identify principles of human learning which apply to teaching. For example:

-goals would be set according to the individual capacities of children.

-children are more ready to learn when their primary and secondary drives are satisfied.

-material to be learned must be presented in a well organized fashion.

-drive, cue, response, and reinforcement constitute the conditions for learning.

-behaviors which are reinforced are more likely to occur.

-children should be helped to notice places where errors commonly are made.

-several short practice or drill sessions are better than one massed drill.

-and so forth.

Activities May Include

-identification of principles of learning which apply to teaching through readings, observation of teaching and learning in classrooms, talks with teachers, and so forth.

-discussion of above principles and how they are or are not applied in teaching settings.

-further diagnosis of teaching and learning.

Objective 2

Students will become familiar with some correlates of learning disabilities (hearing, speech, vision, glandular, cerebal dysfunction, intelligence, social and emotional maladjustment, and so forth) and with techniques and materials used to diagnose such learning disabilities.

Activities May Include

-readings, lectures, seminars.

-observation of classroom(s) of children with learning disabilities.

-team diagnosis of an individual child employing case study, selected diagnostic instruments, and so forth.

-team prescription of instructional program based upon diagnosis and application of principles of learning.

APPENDIX

Theory Into Practice
Analysis of Teaching

Objective 1

Students will consider what teachers do in the active phase of teaching. (For example, structure, admonish, regulate, set standards, judge, question, reprimand, clarify, and so forth.)

Activities May Include

-observation of teaching (live, filmed, video-taped).

-determination of descriptors (verbs) useful in discussing teacher behavior.

Objective 2

Students will learn to use one of several descriptive techniques available for analyzing teacher behavior (OSCAR, Interaction Analysis, Hughes or Bellack system or other).

Activities May Include

-self-instructional programs, readings, discussions.

Objective 3

Students will observe the active phase of teaching and analyze it according to the technique learned.

Activities May Include

-observation analysis and discussion.

Objective 4

Students will describe the kind of learner behavior they would like to elicit as teachers.

Activities May Include

-students will practice teaching a variety of learners to attain a particular kind of child response, e.g. active vs. attending.

-use of video tape play backs.

Objective 5

Students will repeat approximately the same procedures as above to study the effect of teacher nonverbal behavior on child response.

Activities May Include

-use of Galloway model.

APPENDIX C

Component Description
Educational Environment and Career Choice
(Educational Psychology 1000)

Support for the Component

The component Educational Environment and Career Choice, originally titled Early Engagement and Awareness: Personal and Professional Decision Making, was created to support the implementation of certain assumptions explicit in the University of Tennessee Pilot Program in Teacher Education (See Appendix A). The assumptions supported through implementation of the component include,

(1) Students should be given an opportunity to determine personal and career goals such as (a) Do I really want to teach, (b) What do I want to teach to whom, (c) What kind of preparation do I need?

(2) Students should become acquainted early with the social, educational and physical environments in which children live,

(3) Students should have opportunities to work with and to study the behavior of diverse kinds of children.

In addition, and to a lesser extent a fourth assumption is involved which states that students should become aware of their self and self-concept, needs, value system and so forth.

Component Development History

Dr. Howard Aldmon, Dean of Admissions, chaired this Pilot Program subcommittee. Committee members included Dr. L. DeRidder, Head of the Department of Educational Psychology and Guidance; Dr. E. Ramer, Head of the Department of Curriculum and Instruction; Dr. B. Plotnicki, Professor, School of Health and Physical Education; and Dr. F. Trusty, Head of the Department of Educational Administration and Supervision. At the conclusion of subcommittee work focused mainly on goal and activity development, the component was turned over to a development team (Dr. W. Butefish, Assistant Professor in Curriculum and Instruction, Mr. S. Dietz, Assistant Professor of Educational Psychology and Guidance who was to teach the component and Mr. Robert Solomon an advanced graduate student) which set about writing behavior objectives, developing appropriate related experiences, and searching out appropriate materials, resource persons and so forth. Two team members were released half-time during the summer quarter of 1968 in order to prepare the component for fall quarter implementation as the first experience for the experimental subjects.

The component development team developed an outline which contained five statements of rationale, six behaviorally defined objectives, and activities consistent with each of the latter. Since each objective serves also as an evaluative criterion, the method of evaluation is explicit.

Component Rationale, Objectives and Activities

Rationale #1

Selection of a career by young people is often a matter of chance. Studies of students in the College of Education show that many students elect teaching without comprehension of their personal strengths or interests, and practically no information of an occupational nature.

Successful career choice, however, is assumed to be predicated on an understanding of self and an understanding of role, or what a person does and how he sees himself doing it. Those aspects of self which appear to be most closely related to career choice are interests, values, and attitudes; and an informed career choice implies that a student understands these aspects of self.

An understanding of the role which an individual will assume in a career is also an important factor in making a career choice. Through planned contact with teaching and teachers, it is expected that students will gain insight into the teaching role which will eventually lead to a more informed and complete commitment to a career.

Behavioral Objective 1

Each student will describe in writing what he has discovered about himself in Educational Psychology 1000. This shall be accomplished when each student lists his significant interests, values, and attitudes as determined by a testing program and counseling sessions.

Activities

(1) The Strong Vocational Interest Blank will be completed in order to help each student determine his aptitude and interests for specific vocations.

(2) The Allport-Vernon Scale of Values will be completed in order to help each student determine his own attitudes and values.

(3) The Rokeach Dogmatism Scale will be completed in order to help each student determine his relative openness toward change. Students will examine their belief systems in relation to the belief systems of others in group discussions concerned with topics on values, beliefs, and attitudes.

(4) Involvement in individual counseling sessions will help students focus their awareness of self, utilizing what has been learned from the testing program.

Behavioral Objective 2

Each student will describe orally and/or in writing how his personality factors, academic aptitudes and interests may relate to the future teaching roles of planner, mediator, and evaluator of pupil learning activities.

Activities

(1) Students will participate in individual group counseling sessions. Their academic aptitude, interests, and significant personality traits will be examined in terms of how these qualities influence their choice of occupation and possible success in teaching.

(2) Students interested in elementary education will observe five different classes: two observations in the primary grades, two observations in the intermediate grades, and one observation in the secondary grades.

Students interested in secondary education will observe five different classes: two observations in the secondary grades, two observations in the intermediate grades, and one in the elementary grades.

All students interested in K-12 programs will observe in five different classes, one of which will be in their special interest area.

Students will make one observation in a class grouped homogenously for the academically talented.

During the observations, students will focus their attention on what the teacher does in order to answer the following questions:

(a) How much time does the teacher spend doing clerical duties compared to the time spent in activities involving student-teacher interaction? Will I be satisfied in spending my time this way?

(b) What problems do I see the teacher encountering in the classroom? Do I want to enter a profession where these kinds of problems must be faced?

(c) What are some skills and concepts I will need to learn in order to become a teacher? Am I willing to work toward learning these skills and concepts?

(d) Which subject or grade level seems to be the one I want to work with? What is it about the subject or grade level that is appealing to me? Is the appeal strong enough to base a commitment to teaching upon?

(3) Each student will informally interview a teacher in-service for the purpose of gaining insight into:

(a) How much time does a teacher spend in the planning phase of teaching?

(b) What are some critical problems both in and outside the classroom inherent in the life of a teacher?

(c) What are some of the rewards a teacher may expect to receive from teaching?

(d) What are some ways in which a teacher evaluates pupil growth and how much time is spent in the evaluation process?

(e) How many extra-curricular duties are teachers expected to perform? Do these duties ever unduly interfere with normal teaching activities?

(4) Students will serve as teacher aides in a variety of subject and grade levels in order to familiarize themselves with children of varying ages and in different parts of the school program.

(a) On the elementary level, students will be actively engaged in reading groups, art lessons, assisting individual pupils, and other activities involving pupil-teacher interaction.

(b) On the secondary level, students will become involved with pupils on an individual and small group basis developing projects and reports.

Rationale #2

It is assumed that the primary source of behavioral development and change stems from the evolution of one's perceptual field, including how he sees himself, others, the role of the teacher, and himself. It is further assumed that evolution of one's perceptual field stems in part from a broadening of relevant experience. A broadening of pre-professional experience may precipitate this expansion and evolution of the perceptual field. A prominent writer in education has reported research which supports the idea of early contact. Pre-service teachers whom he surveyed reported a need for:

(1) Working with children as teacher aides, teacher assistants, tutors, and recreation aides;

(2) "Live in" experiences in differing environments (i.e., lower class, racially mixed);

(3) Experience at all grade levels;

(4) Work with children having special problems (i.e., the physically and mentally handicapped, and the emotionally disturbed).

Underlying these ideas is the assumption that one of the most appropriate ways to develop perceptual fields and widen experiences is to come into contact with many aspects of the profession early in the student's college career. Of necessity, this early contact with the profession will entail contact with the children professionals are involved with, in as many kinds of situations as practical.

It is hoped that the student's first-hand information basic to a vocational commitment can and will be greatly expanded upon through these contacts with children and professionals in the broad area of interaction. It is further hoped that the student will be able to make a wiser and deeper vocational choice leading to a commitment through this exploration.

Behavioral Objective 3

Each student will identify and describe the special programs for the physically handicapped, the emotionally disturbed, the mentally retarded and the academically gifted, in order to increase what he knows about the atypical child and therefore lead to a more informed judgment concerning a career choice.

Activities

(1) Students will visit Daniel Arthur Rehabilitation Center in Oak Ridge, Tennessee.

(a) Students will aid in working with physically handicapped (brain-injured children) in order to gain some insight into what is expected of teachers of the handicapped.

(b) Students will assist teachers of the retarded in Emory Valley School for retarded children, in order to understand the nature of the work of teachers of retarded children.

(c) Students will visit the sheltered workshop and observe and record the things that teachers do in working with productive mentally retarded.

(2) Students will engage in a series of experiences working actively with group leaders at the Dale Avenue Settlement House. These groups will be elementary school children or teenagers. These experiences will be for the purpose of increasing what the student knows about different kinds of children.

(3) Guidance, special education, and health service school personnel will discuss their services with students. The emphasis will be on what these people do for and with typical children.

(4) A social worker from the Knox County Welfare Department will discuss with the student problems of children from the lower socio-economic groups so that through better understanding of the lives of these children a more informed career choice may be made.

(5) Students will assist in the education activities sponsored by the Community Action Committee in order to supplement awareness of the needs of children from low income families.

Rationale #3

School environments vary widely. Some factors influencing the make-up of environment are: the actual physical condition of the school itself, the backgrounds of the pupils attending the school, the taxpayers supporting the school, the enthusiasm of the teaching staff, and the attitudes of the administrators; to mention the more obvious categories. The total environment of the school and learning situation has been shown to be of strategic importance in the attitudes of the pupils and the actual effect of the learning situations themselves, often affecting teaching and teachers.

Some of these conditions are subtle, but others can be observed, noted, and discussed by people who have little or no formal background education. It would seem to be a valid assumption that many decisions affecting professional careers are made because of these factors, students should be aware of the variety and import of these factors, and further that first-hand information pertinent to these factors may well be instrumental (or at the very least relevant) to this career choice.

Behavioral Objective 4

Students will describe how they feel about the total learning environment in each of a variety of schools they have visited. The description will not reflect sophisticated analyses of the schools, but a description of the "feeling" that one gets about the school environment.

Activities

(1) Schools visited in order to fulfill the requirements for behavioral objective #2 will be of different types. The schools visited will be varied to the degree that a comparison between types of schools can be made by the students, i.e., one school with predominantly culturally disadvantaged children, one school with predominantly culturally affluent children, and one school with both kinds of children. Each description of the learning environment will be followed by a summary containing the student's reactions to such questions as:

(a) Is this the type of environment in which I hope to work?

(b) With what I know and what I am learning about myself, could I successfully work in this environment?

(c) Is the school environment more attractive to me as a place in which to work than that of others?

Rationale #4

It is generally accepted that many students choose a career without really bothering to find out much about it. Consequently, many vocational choices are unrealistic, even though college students are expected to be capable of making intelligent career choices soon after they enter college. Studies have shown that one-third of the college students studied chose a career without doing any reading about it, and that 95% of another group wanted to enter the four most crowder occupations.

However, it is assumed that students can participate in planning personal and professional career goals, and that they will be able to relate relevant occupational information to the planning of these goals. Basic to this planning is the assumption that information about one's career choice is necessary to that choice. For these reasons students should learn early all they are able to about the regards, opportunities, vertical and horizontal mobility, social status, limitations, and drawbacks present in the teaching profession. Each student, regardless of his decision, will have the occupational information basic to an intelligent career choice.

Behavioral Objective 5

Students will compare the opportunities available to them in teaching and teaching-related fields to opportunities available outside of education. Students will contrast the social status available to them as teachers and as teachers of their specific subject-interest field to social status available to them in other situations not related to education. Through such comparisons, students will be able to make a career decision based upon a realistic view of the teaching profession.

Activities

(1) Students will research teaching salary schedules of several states and independent school systems. Attention will be directed to the rate of increase in teacher's salaries over the past decade. Salaries of other professions and careers will also be investigated.

(2) The Dean of the College of Education will explore with the students the range of opportunities in education beyond classroom teaching.

(3) Teachers in-service will visit the student and explore with them the professional and social aspects of teaching.

(a) A male in-service teacher with a family will discuss with students the positive and negative aspects of teaching as a career choice.

(b) An educational sociologist will discuss with the class the relationship between teachers and class structure as it exists in American communities. The discussion will include information relevant to social class and teachers of particular subjects or grade levels.

Rationale #5

Educational Psychology 1000 is the beginning of a planned sequence of experiences making up what is known as the Pilot Program in Teacher Education. In order that students may progress to the next logical step in the sequence and maintain a continuity between these experiences, each student will be asked to make a tentative commitment to teaching as a career choice, or to reject teaching as a career choice.

Behavioral Objective 6

Student will express a desire to make a tentative commitment to continuation of teacher education at the University of Tennessee or, students will express a rejection of teaching as an occupational choice. Students making either decision will express factors instrumental in making this choice.

Activities

(1) Students will describe in writing the outcomes of Educational Psychology 1000 in an attempt to answer better the questions:

(a) Do I know myself well enough to make a commitment to a professional career choice?

(b) From what I have learned of myself, do I think I can be a successful teacher?

(c) What are the things I want from my occupation? Does teaching offer these things?

(d) From what I have learned of teaching, is it a career in which I can be satisfied and productive?

(e) Is there a level or subject which seems most attractive to me in terms of my interests and aptitudes? What is the level and/or subject area?

(f) Is there a particular type of children with whom I believe I can work most effectively and with whom I will be productive and fulfilled? Which type of children is this?

(2) Students will complete an objective course evaluation form at the termination of the experience.

APPENDIX D

Master Design for the Pilot Teacher Training Program

Submitted by the Committee on Evaluation
October 3, 1967

Introduction

The objective of this report is to present to the committee charged with the responsibility of establishing a pilot teacher training program, a global design that will minimize the probability that research findings will be obscured by the influences of irrelevant variables and will permit the evaluation of specific components of the pilot program at a future time when appropriate instruments and statistical designs have been developed. The master design to be presented possesses limitations relative to its susceptibility to sources of invalidity, therefore, a summary of prominent sources of invalidity, especially as they relate to the pilot teacher training program, is presented to assist the committee in making its decision.

Sources of Invalidity*

There are eight sources of invalidity in an experiment which if uncontrolled may not only enter into the experiment but their influence may be mistakenly attributed to the effect of the experimental treatment. Failure to control these sources of influence may mean that observed changes associated with components of the pilot program or with the total program are not purely the result of the program, but rather result from irrelevant sources alone, or more commonly, irrelevant sources confounded with pilot program effects. The eight sources of invalidity are:

(1) history effects: changes in post experiment observations due to independent events that have occurred during the course of the experiment. The longer the duration of the experiment, the greater the necessity to be concerned with this source of contamination; thus, this source must be controlled for the evaluation of the pilot program.

(2) maturation effects: changes in post experiment observations due to "normal" growth or development. Again, in an experiment of long duration, such as the pilot program, this irrelevant influence demands control.

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*Adapted from Campbell, D. T. & Stanley, J. C. Experimental and Quasi-Experimental Designs for Research on Teaching. In N.L. Gage (Ed.) Handbook of Research on Teaching. Chicago: Rand McNally, 1963, pp. 171-246.

(3) pre-testing: changes in post experimental measures--usually incremental--which are a function of having participated in a pre-test measure. Since we will undoubtedly want to employ pretests when assessing specific components of the program so that progress can be detected, this irrelevant source of influence is of major concern.

(4) instrumentation: changes in post-experimental measures due to unreliability and actual changes in observational and/or measurement procedures over time. For example, if we should employ faculty rating scales at two points separated by time to evaluate performance in relation to a specific component of the program, the possibility exists that faculty rates may not perform identically on both occasions, thus giving rise to differences which are independent of the effects of the pilot program.

(5) regression effects: changes in post-experimental measures--characteristically toward the mean--which are an artifact of the unreliability of instruments used. This source of invalidity is of greatest concern when dealing with extreme groups which probably will not be the case in the pilot program.

(6) lack of pre-treatment equality of groups: changes in post-experiment measures due to the fact that experiment groups were not equal initially. This will be a serious source of contamination if randomization is not utilized in the selection procedures. (Note: the use of co-variance on a post-facto basis to "adjust" for pre-treatment inequalities is rapidly falling into disrepute.)

(7) differential mortality: differences in post-experimental measures resulting from the fact that more subjects--presumably of a different type--have dropped out of one of the groups under study. The evaluation committee perceives this to be one of the most serious sources of invalidity, if not the most serious, that must be confronted in the pilot program. Normal attrition is not the concern for if a control group is utilized, this form of attrition should be manifested for both groups. The type of attrition that is of concern is that which is related to the conditions of the experiment. For example, there is justification to believe that there will be additional attrition among students assigned to the pilot program, because of the program's inherent novelty and potentially threatening demands. Examples of the latter would include earlier exposure to the classroom and attention to self, both of which may threaten a certain portion of the experimental sample and thus prompt them to terminate or transfer. The very fact that one of the program's objectives is to encourage an early vocational commitment to education will result, if this objective is achieved, in a disproportional number of students in the experimental sample

deciding that teaching is not for them. The overall result of the operation of these factors will be that the remaining members of the experimental group will be more secure, more committed than the control group. Thus, these personality factors will be confounded with the true experimental effects. (A "conservative" remedy for this problem would be to include as many of the experimental "drop-outs" in the post-experimental assessment of the experimental sample as possible.)

(8) selection-maturation interaction: changes in post-experimental measures due to the selection of groups with differential maturational rates. Since the strategy to be employed in the pilot program calls for some form of randomization in the selection process and since selection will be from a common population, this source of invalidity will not be of concern.

Aside from the above eight sources of invalidity, there are four additional sources that can limit the scope to which pilot program findings can be generalized. Due to methods of selection, pretesting and experimental arrangements, irrelevant effects can interact with the experimental effect with the result that you can legitimately generalize your results only to populations which have experienced similar selection, pretesting and experimental arrangements. Four such sources of invalidity have been identified and they are enumerated as follows:

(9) pre-test--treatment interaction: Changes in post-experimental measures which are a result of the interaction of pre-tests and the experiment. In short, the final measure is a function of both pretest and treatment; without the pretest, the final measure would have been different. This implies that in the pilot study, it would be desirable to take post-experimental measures on groups that have not been administered a pre-test. It will be shown, that a master design can be constructed thus permitting assessments of progress and providing sufficient instances where pretesting is absent thus enabling an examination of unconfounded experimental effects.

(10) selection--treatment interaction: changes in post-experimental measures which are partially an artifact of the sample selected. For example, if in the pilot study, only "interested" students are selected to participate or if only the "best" instructors are involved in the teaching process, then resultant findings can be properly generalized only to populations of "interested" students or can be replicated only when superior faculty members are utilized. If it is the intention of the committee to develop a program that may have wide applicability relative to the professional training of teachers, then findings resulting from this effort should not have to be qualified or limited to special populations. This points to the desirability of arbitrarily selecting study participants and avoiding the introduction of faculty and material resources that cannot be readily replicated at other comparable institutions.

(11) reactive arrangements: changes in post-experimental methods because of participants' knowledge that they are participating in an experiment. This is simply the Hawthorne Effect and is difficult to control through procedures of design alone. The best way that this effect can be minimized in the pilot study is to attempt, whenever and wherever possible, to downplay the novelty associated with the program. Again, we can do much to minimize this effect procedurally but can do little to minimize it statistically.

(12) multiple treatment interference: changes in post-experimental measures which are the result of multiple treatments applied in a given sequence. When an overall assessment of the pilot program is made, this assessment will be the result of many specific treatments provided in a relatively planned sequence. Technically, resultant overall findings can be generalized to only hypothetical populations which received the same treatments in the same sequence. As was the case for the Hawthorne Effect, little can be done to minimize this limitation statistically. However, if individual treatment components within the program are independently assessed and if the sequence of components is such that it can be easily replicated, this concern is greatly minimized.

Implications for a Master Design

A perusal of the above 12 sources of invalidity reveals that the great majority of sources can be relatively controlled through (1) the utilization of a completely random sampling plan and (2) the utilization of control groups. To the degree that completely random procedures are used in the selection of participants, sources of invalidity (6) pre-treatment inequality of groups, is minimized. (Randomization is the only method that statistically assures equality of groups on all dimensions or traits.) Moreover, the use of a control condition should minimize sources (1), (2), (3), (4), (5), and (8). However, the application of a simple experimental group and control group design will not guarantee the successful control of differential mortality (source (7)), testing-treatment interaction (source (9)), selection treatment interaction (source (10)), and the Hawthorne Effect (source (11)). Therefore, the evaluation committee recommends the use of slightly more involved designs that provide greater opportunity to exercise control over sources of invalidity.

The Random Four-Group Design

If it is at all possible, the evaluation committee recommends the use of a random four-group design. The inherent advantages of this design is its simplicity. However, it controls the same sources of invalidity mentioned in connection with the simple experimental group--control group design with the advantage of also controlling source (9) i.e., testing-treatment interaction. This design is diagrammed below.

Random Four-Group Design

N60	R R	T_1	X	T_2 T_3	experimental groups
N60	R R	T_4		T_5 T_6	control groups

Where R indicates that group membership has been determined randomly, T_1 denotes the application of a measuring or observational device and X indicates the administration of the treatment i.e., the total pilot program or a specific module.

It can be seen that the comparison $T_5 - T_6$ yields an estimate of the effect due to pretesting i.e., source (3), the comparison $(T_2 - T_3) - (T_5 - T_6)$ estimates the effect due to interaction of testing and treatment i.e., source (9); and the comparison $T_3 - T_6$ will reveal whether the pilot program actually has been successful.

The above design possesses the advantages of both simplicity and flexibility. If, for example, pretesting should not be desired for the evaluation of certain components, then the two experimental and control groups can be "collapsed" producting a post test only control group design. (Diagrammed below)

R	X	T_1
R		T_2

The utilization, however, of the above master designs place the following constrictions upon the structure of the pilot program. First, complete randomization is a sine qua non. The evaluation committee further recommends that students be randomly selected from a population broader in scope than "volunteers." If the sample is drawn exclusively from volunteers, then a selection-treatment interaction (source (10)) is likely to be present resulting in an inability to generalize potential findings to a population other than volunteers.

The evaluation committee also attended to the question of sample stratification. Would it be desirable to systematically incorporate into the sample, students representing all or some of the major areas of subject matter concentration? The committee's view was that it would be desirable but impractical. Unless the experimental sample can be extremely large, stratification procedures designed to assure subject matter representation will yield such small groups that comparisons will be meaningless. The possibility of stratification on the basis of secondary vs elementary, however, is plausible.

Also, the evaluation committee suggests that some thought be given to the inclusion of transfers that enroll in the College of Education

during their sophomore and junior years. Unless evidence can be offered to the contrary, it must be assumed that those that declare majors in education before the start of their college careers constitute a population different from that consisting of transfers into education. (It is hypothesized that the transfer population will possess greater vocational maturity and commitment relative to education.) A stratified sampling scheme could be devised that would postpone the selection of some sample participants until the sophomore and junior years so that transfers could be included in the pilot program. Although such a procedure introduces several complications, the problems posed must be weighed against two obvious advantages. First, such a stratification scheme minimizes source of invalidity (10) and thus permits findings to be generalized to all, or nearly all, students enrolled in the College of Education. Secondly, inclusion of transfers results in a sample which is more representative of future teacher populations in general and, therefore, results can be replicated or adopted by other institutions with greater confidence.

Another topic discussed by the evaluation committee was the problem of sample size. The committee strongly points to the desirability of having at least 30 students in each of the two experimental groups (for a total of 60 in both groups) at the termination of this five to six year program. This means that an initial experimental sample far in excess of 60 will have to be drawn to compensate for attrition. If, for example, we find that approximately 65% of students enrolled in education eventually drop out, then the initial experimental sample should be in the neighborhood of 170 subjects. Such a figure should produce adequate post experimental n's providing that differential mortality (source (7)) is not a prominent influence.

In conclusion, the evaluation committee desires to restate some of the potential weaknesses associated with its recommended design. First and foremost, it is concerned with the threat of differential mortality for reasons stated previously. Although the described design usually prevents this source of invalidity from being realized, the unique and potentially treatening nature of this experiment greatly increases the chances of its presence. The only solution, as stated earlier, is to include in as many post experimental observations as feasibily possible, measures taken on those who have dropped out.

Selection and treatment interaction and the Hawthorne Effect also loom as effects that could limit the generalization power of experimental results. The former is of particular significance if a decision is made to sample from either a population of volunteers or if sampling is limited to only those that declare majors in education as freshmen. Regarding the latter, the Hawthorne Effect, all that can be done is to impress upon all concerned with the execution of the pilot program, the importance of attempting to minimize this source of invalidity by doing all that is humanly possible to prevent experimental students from adopting an "I am a guinea pig" attitude.

APPENDIX E

CURRICULUM ADJUSTMENTS TO ACCOMMODATE PILOT PROGRAM

Proposed Pilot Programs for Art Education Majors (1-12)

I.	Professional education and specialized professional courses		
	Level 1 Early Engagement and Awareness: Professional and Personal Decision Making	Ed. Psych. 1000	3
	Level 2 Professional Knowledge and Skills	Study of Children or Study of Adolescence	3
		Study of Self	2
		Study of Human Learning	6
		Curriculum I (approximately 11 modules other than special methods)	6
	Level 3 Theory Into Practice	Curriculum II (Special Methods)	3
		Analysis of Teaching	3
		Microteaching	3
	Level 4 Professional Practice	Simulation and Student Teaching	15
			44
II.	Teaching area and electives (as described in General Catalog)[1]		72
III.	General education (as described in General Catalog)[2]		75
	TOTAL HOURS IN PILOT PROGRAM		191

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[1] "Teaching area and electives" has been increased from 68-72 hours.

[2] General education is reduced from 90 to 75 hours: 12 hours eliminated in science, 3 hours in general psychology (Psychology 2120).

Proposed Pilot Program for Elementary Education Majors (grades 1-9)

I.	Professional education and specialized professional courses		
	Level 1 Early Engagement and Awareness: Professional and Personal Decision Making	Ed. Psych. 1000	3
	Level 2 Professional Knowledge and Skills	Study of Children	3
		Study of Self	2
		Study of Human Learning	6
		Curriculum I (approximately 11 modules other than special methods)	6
	Level 3 Theory Into Practice	Curriculum II (specialized methods[1])	33
		Analysis of Teaching	3
		Microteaching	3
		Simulation and Student Teaching	15
			74
II.	Specialized courses (12 quarter hours)	Art (elective)	3
		Mathematics 2120-2130	6
		Music 3110 or 3120	3
			12
III.	Area of concentration		12
IV.	Electives		6
V.	General education (87 quarter hours). As described in General Catalog with change noted below.[2]		87
	TOTAL HOURS IN PILOT PROGRAM[2]		191

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[1]Methods courses to be retained from current program and developed in new formats (self-pacing, self-instructional) are: language arts, social studies, reading, mathematics, science, art, children's literature, music (2), physical education and school health.

[2]Changes from current program to Pilot Program replace the following:

a. General education: Psychology 2120 (3 hours)
b. Professional education and/or specialized courses:

1. art elective (one only) 3 hours
2. music education (one course only) 3 hours
3. Ed. Psych. 2430, 3 hours
4. elective in health or physical education, 3 hours
5. core courses, 9 hours

Proposed Pilot Program for Music Education Majors (1-12)

I.	Professional education and specialized professional courses		
	Level 1 Early Engagement and Awareness: Professional and Personal Decision Making	Ed. Psych. 1000	3
	Level 2 Professional Knowledge and Skills	Study of Children or Study of Adolescence	3
		Study of Self	2
		Study of Human Learning	6
		Curriculum I (approximately 11 modules other than special methods)	6
	Level 3 Theory Into Practice	Curriculum II (Special Methods)	3
		Analysis of Teaching	3
		Microteaching	3
	Level 4 Professional Practice	Simulation and Student Teaching	15
II.	Teaching area and electives (as described in General Catalog)[1]		81
III.	General education[2]		66
	TOTAL HOURS IN PILOT PROGRAM		191

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[1]The General Catalog indicates "Teaching area and electives" for teachers of special subjects is 68 hours. (See page 120).

[2]Program for music majors requires only 66 hours instead of usual 90 (See "Music Education Curriculum Sheet").

Proposed Pilot Program for Physical Education Majors (1-12)

I.	Professional education and specialized professional courses		
	Level 1 Early Engagement and Awareness: Professional and Personal Decision Making	Ed. Psych. 1000	3
	Level 2 Professional Knowledge and Skills	Study of Children or Study of Adolescence	3
		Study of Self	2
		Study of Human Learning	6
		Curriculum I (approximately 11 modules other than special methods)	6
	Level 3 Theory Into Practice	Curriculum II (Special Methods)	3
		Analysis of Teaching	3
		Microteaching	3
	Level 4 Professional Practice	Simulation and Student Teaching	15
			44
II.	Teaching areas and electives (as described in General Catalog)[1]		72
III.	General education (as described in General Catalog)[2]		75
	TOTAL HOURS IN PILOT PROGRAM		191

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[1]The General Catalog indicates "Teaching area and electives" for teachers of special subjects is 68 hours. (See page 120) However, the programs outlined for PE majors adds up to 72 hours.

[2]General education is reduced from 90-75 hours: humanities reduced 3 hours, social studies reduced 9 hours, and general psychology 2120 eliminated.

Proposed Pilot Program for Secondary Education Majors (grades 7-12)

I.	Professional education and specialized professional courses		
	Level 1 Early Engagement and Awareness: Professional and Personal Decision Making	Ed. Psych. 1000	3
	Level 2 Professional Knowledge and Skills	Study of Adolescence	3
		Study of Self	2
		Study of Human Learning	6
		Curriculum I (approximately 11 modules other than special methods)	6
	Level 3 Theory Into Practice	Curriculum II (Special Methods[1])	3
		Analysis of Teaching	3
		Microteaching	3
	Level 4 Professional Practice	Simulation and Student Teaching	15
			44
II.	Teaching areas and electives (as described in General Catalog)[2]		72
III.	General education (as described in General Catalog with changes noted below).[2]		75
	TOTAL HOURS IN PILOT PROGRAM		191

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[1]Only one methods course must be taken in each area of endorsement (certification).

[2]Changes from current program eliminate or replace the following:

a. General education reduced from 90 to 75 hours: 12 hours in science, 3 hours in general psychology (Psych. 2120).

b. Teaching area and electives changed to 72 quarter hours. Most programs as listed in General Catalog already require 72 quarter hours.

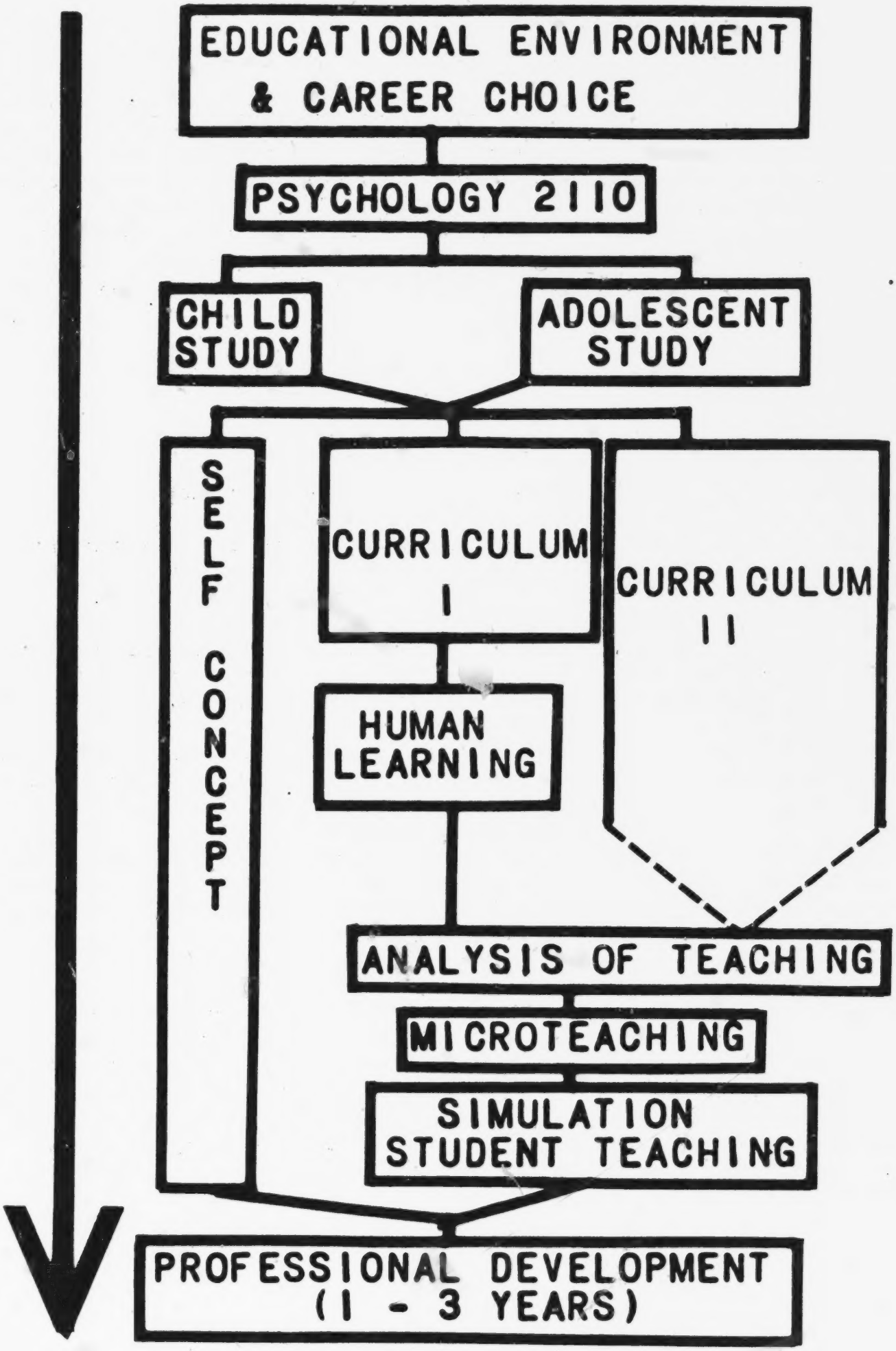
APPENDIX F

A PROGRESS REPORT OF THE PILOT PROGRAM IN TEACHER EDUCATION AT THE UNIVERSITY OF TENNESSEE

Presented to the Faculty of The College of Education

September 12, 1968

by the Committee on Pilot Program Development and Implementation


EDUCATIONAL ENVIRONMENT
& CAREER CHOICE
PSYCHOLOGY 2110
CHILD STUDY
ADOLESCENT STUDY
SELF CONCEPT
CURRICULUM I
CURRICULUM II
HUMAN LEARNING
ANALYSIS OF TEACHING
MICROTEACHING
SIMULATION
STUDENT TEACHING
PROFESSIONAL DEVELOPMENT
(1 - 3 YEARS)

Introduction

A. Rationale:

One year ago a proposal for a Pilot Program in Teacher Education was presented to this faculty by the Committee on Experimentation and Innovation.[1] The Pilot Program proposal grew out of interest on the part of the faculty and administration to design and implement a program which (1) reflects and enhances the maturity and capabilities of our students, (2) incorporates promising new approaches to teacher education, and (3) takes into account changes in the social and educational environment of public schools. The foregoing considerations are supported by the following assumptions we can make concerning our undergraduates:

Assumptions About Students

1. They have different personal and professional needs.
2. They wish to participate in planning personal and career goals.
3. They learn at different rates and in unique ways.
4. They are capable of being self-directed and self-propelling.
5. They are capable of learning somewhat independently.

The new program has embraced these assumptions as the essential marrow from which to generate new directions and procedures in the University of Tennessee College of Education.

The Pilot Program Committee also feels the necessity of restating the idea that the proposed new professional sequence for our College of Education is experimental and as such contains inherent problems and inconsistencies. Continual confrontation with such circumstances is the nature of a perpetual search for the attainment of the best education program for our students.

To succeed in developing such a program we need to constantly ask ourselves the following questions:"What is best for the student ? What do we want this person to be like in four years, in fifteen years ? Are we providing the kind of program that encourages individual development, self-discovery, and learning for its own sake or are we trying to maintain a paternalistic system, which inhibits the process of becoming a person ?"

Former Vice President for Academic Affairs, Dr. Herman Spivey, succinctly presented a challenge to the University in his farewell address to the faculty entitled Unfinished University Business:

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[1] Cox, Cruickshank, Dietz, Merrill, Milton, Murphy, Nunnery, Thurman, Wagoner Watson-Later Howard, Venditti

> Students, faculty, administrative officers and all other members of the university community must learn how to interact with one another far more sensitively, sympathetically, responsively, maturely and democratically than we now do. The gap grows even smaller between the knowledge and understanding of the students as compared with that of the faculty, and the gap between the values and objectives of the two groups grows ever wider. This makes all the greater and more urgent the challenge to establish student-faculty rapport, genuine partnership in learning. As you know, in the United States in particular, the college years have been structured and managed for the prolongation of adolescence. It is time now to wean ourselves away from that pattern and to develop attitudes and conduct more conducive to student fulfillment, realization of potential, each in his own individual way and at his own pace. We have long maintained verbally that college students are partners in learning, but until one o'clock on their commencement day we do not think of them or act toward them as full fledged citizens of the university community instead, more like children, too often like customers, sometimes like vassals. The parent-child relationship is precious; and one of the hardest things for any parent to learn is when and how to let go. Prolonged beyond eighteen, a close, directive and protective relationship, however benevolent, is suffocating and prevents self-discovery and maturation. Far more restrictive, however, is the king-subject, boss-worker attitude characteristic of some professor-student relationships. How shocking is the popular American college concept of the professor in his classroom as a king in his castle--incapable of error, immune to criticism!

Our College of Education has the potential in terms of personnel and educational resources to provide for the new relationships and directions Dr. Spivey challenges the University to seek and it has the opportunity to assume a leadership role in this task both within and without the University. The following Pilot Program progress report suggests ways in which a number of our faculty have collectively approached the problem of designing and developing a new professional sequence which we hope will withstand this challenge.

B. Implementation Plan:

During this past year approximately forty faculty members have contributed to the further development of the Pilot Program. As a result of their efforts, five components[2] of the attached program flow chart are being implemented and experimented in this academic year.

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[2]Educational Environment, Analysis of Teaching, Microteaching, Simulation and Student Teaching.

Initially sixty freshmen will engage in relevant career oriented experiences this fall and winter via the Educational Environment and Career Choice course. As the accompanying model flow chart demonstrates, these freshmen will progress through the four year professional education sequence of the Pilot Program. The present program and the Pilot Program will exist side by side.

To arrange for course credit trade-offs between the current program and the Pilot Program, curricula modifications have to be made to accomodate the progression of the sixty experimental students through the Pilot Program (see Appendix A).

An additional experimental group of twenty-seven senior students will also begin progression through an experimental sequence of courses this fall, enabling our College immediately to evaluate these courses, both individually and as a year-long continium of experiences. The senior sequence will include Analysis of Teaching (fall), Microteaching (winter), and Simulation (approximately two weeks), which will be scheduled in conjunction with Student Teaching (spring).

C. Program Description:

The projection of new and stronger faculty-student and faculty-faculty relationships is a hallmark of the Pilot Program. Students will be progressing through the program at independent rates and in small groups under faculty tutelage. Many faculty members will necessarily be coordinating efforts to provide a cohesive sequence for them. To illustrate, the proposed Human Learning Laboratory (Junior Year) will require the collective energies of methods people, content specialists, educational psychologists, and skilled supervisory personnel. The skills and knowledge of each will be needed to adapt subject area content and its inherent methodology to the levels of the Gagne learning model in the theory and planning stages, and then facilitate its application by our undergraduate pre-service teachers in a microteaching-like setting.

Alongside the title of each of the components described below is a list of our faculty members and faculty members from outside of the College of Education who have participated over the past year on the respective subcommittees and who were responsible for the development of a particular component.

I. Freshman Year Stage of The Pilot Program

This initial educational engagement phase of the Pilot Program is concerned with the need of incoming freshmen majoring in education to have the opportunity to investigate a career in teaching. Surveys here at the University of Tennessee College of Education and similar institutions across the nation demonstrate that many who earn bachelor degrees in education do not enter teaching. It can also be shown that many good undergraduate students in education reject this career preparation after freshman or sophomore years and enter other subject major fields. Dissatisfaction with the program experiences, failure of most programs to provide both early exposure and sufficient information relative to the teaching role, and the lack of information concerning the many career possibilities available in teaching are some primary reasons why many students and graduates elect these decisions. It is hoped that the first stage experiences incorporated in the

Early Engagement Component can provide some solutions for these problems.

The Educational Environment Component

Dr. Aldmon (Chairman): Committee on Direct Experience (Dr. De Ridder, Education Psychology, Dr. Ramer, Curriculum and Instruction, Dr. Plotnicki, Health and Physical Education, Dr. Trusty, Educational Administration and Supervision). Dr. Butefish, Mr. Solomon.

This component will be introduced this fall as a three credit hour course entitled Educational Environment and Career Choice and will use a pass-withdraw grading system. Mr. Dietz from the Department of Educational Psycholody and Mr. Blank from the Curriculum and Instruction Department will be managing this freshmen group in their progression through varied activities and experiences described below. Students will involve themselves in the course activities for individually varied lengths of time. The ultimate aim of this course is to help the student decide to make a commitment to teach or to withdraw from the College of Education program and to enable him to base this decision upon information and attitudes he can express. It is anticipated that this decision will be predicated upon the learning experiences they engage in while pursuing the following objectives and activities.

Objectives

1. Students will be able to state reasons for their commitment to teach.

2. Students will be able to describe orally and/or in writing how his personality factors, academic aptitudes and interests may relate to the future teaching roles of planner, mediator, and evaluator of pupil learning activities.

3. Students will be able to describe special programs they have been exposed to for the physically handicapped, the emotionally disturbed, the mentally retarded and the academically gifted.

4. Students will be able to describe their reactions to the learning environment in each of the schools they visit.

5. Students will compare the opportunities available to them in teaching and teaching-related fields to opportunities available outside of education.

Activities of Students

1. Examine and discuss results of values, interest, and other testing and rating oriented instruments, in counseling sessions.

2. Interview various in-service teachers.

3. Serve as teacher-aides in limited sessions at varied grade levels if possible.

4. Observe teaching lessons at elementary, intermediate and secondary levels.

5. Observe and work with teachers of the physically handicapped and the retarded at the Daniel Arthur Rehabilitation Center in Oak Ridge, Tennessee.

6. Engage in work with group leaders at the Dale Avenue Settlement House.

7. Participate in discussion meetings with guidance, special education, and health education people and one or more social workers from Knox County Welfare Department.

8. Investigate teaching salary schedules and other aspects of the material reward opportunities available in teaching and other career professions.

9. Explore the professional aspects of teaching with inservice teachers.

10. Answer the following elementary questions relevant to deciding whether or not they want to teach, and if so, what they would like to teach.

    a. Do I know myself well enough to make a commitment to a professional career choice ?

    b. From what I have learned of myself, do I think I can be a successful teacher ?

    c. What are the things I want from my occupation ? Does teaching offer those things ?

    d. From what I have learned of teaching, is it a career in which I can be satisfied and productive ?

    e. Is there a level or subject which seems most attractive to me in terms of my interests and aptitudes ? What is the level and/or subject area ?

    f. Is there a particular type of children with whom I believe I can work most effectively and with whom I will be productive and fulfilled ? Which type of children is this ?

Psychology 2110

At present, the general education psychology course (2110) will be the additional freshmen course prerequisite previous to this experimental group's sophomore year stage of the Pilot Program. This course has not been altered and remains as a requirement in General Education. However, Psychology 2120 will not be taken by this experimental group. (see Appendix A for the Psychology 2120 replacement).

II. Sophomore Year Stage of The Pilot Program

This stage, as presently envisioned, will encompass the experimental

professional Pilot Program components to be experienced by this above group in their sophomore year. The model components included in this stage are presently defined as courses which after thorough experimentation with this group of sixty students, will give way to flexible scheduling as the total program development achieves a cohesive identity reflecting what has or has not proven worth retaining. The Study of Children or Study of Adolescence, the Study of Self, Curriculum I and Curriculum II will provide the sophomore year professional experiences, although not necessarily in the order given.

It is projected that Self Study, on a limited basis, will extend over the sophomore, junior, and possibly into the senior year. Experimentation with this novel kind of activity will provide evidence with respect to its efficacy as a protracted two or three year experience. In like manner, the Curriculum I self-instructional modules and the Curriculum II methods courses, as explained below, will undoubtedly not be completed by most of the experimental group students within this one year. Most of the ten or twelve modules in Curriculum I and the methods courses in Curriculum II are scheduled for the Junior Year Stage of the program.

An explanation of the content, objectives, and activities of the above courses are given below.

Child Study Component

Dr. Thompson (Chairman): Department of Educational Psychology, Dr. Highberger, Child Development and Family Relations, Dr. Newton, Psychology Department, Dr. De Ridder, Department of Educational Psychology.

The content for this component includes a comprehensive child study core which is designed for students bringing all ranges of background knowledge to the teacher education program.

Subject matter areas included here are:

1. Child Study Techniques
2. Principles of Behavior
3. Intervention Techniques
4. Principles of Development
5. Developmental Levels or Stages (expectations of performance for different age levels)
6. Specific Topics of Child Development
7. Specific Categories of Children
8. The Child, His Family, and Their Development

Objectives

Students will:

a. Write anecdotal records.
b. Construct, administer, and interpret socio-economic devices.
c. Interpret cumulative record data (test scores, grades, etc.)
d. Demonstrate interviewing skills with children, parents, and teachers (e.g., questioning, leading, supporting, clarifying,etc.).
e. Demonstrate theoretical knowledge of social learning theory and adjustment mechanisms.
f. Demonstrate ability to use the environmental modification techniques in a classroom situation.

g. Demonstrate applied knowledge of principles of development.
h. Utilize techniques for identifying children with special needs.

To provide varied experiences and allow for individual differences among and within students, the Child Study Component will employ self-instructional materials, video taping units, films, laboratory experiences, simulation, and specific identified materials and equipment which will significantly contribute to a relevant Child Study Component in the experimental teacher education program.

Adolescent Study Component

(Department of Educational Psychology Subcommittee to be identified)

At present, the existing course entitled Adolescent Psychology will be scheduled for the experimental secondary education major until the Adolescent Study Component is ready for inclusion in the Pilot Program.

Self-Concept Component

Dr. Mc Clain (Chairman): Department of Educational Psychology, Dr. Scott Counseling Center, Dr. Trusty, Educational Administration and Supervision.

The theoretical background for the self-concept component of the program is contemporary phenomenology or self-theory. The major objectives for the teachers in training include basic understanding of how the self develops and understanding of their own selves in depth with focus on themselves as persons who are becoming teachers. Such knowledge should help prepare the subjects for effective teaching by increased understanding of human behavior in general and increased understanding of the means for facilitating growth. Furthermore, self-understanding in depth should prepare them better to use their unique selves in the teaching role.

Methods to be employed include: (1) the study of the literature of the self, both theoretical and research, (2) the study of themselves through group process, and (3) self-analysis under the supervision of a clinical psychologist by means of personality tests. These three procedures would proceed simultaneously, each one contributing to the other two. This facet of the program, as stated above, would begin in the sophomore year and may continue throughout the program. Meetings would average a minimum of one hour per week, sometimes in large groups and sometimes in small. Pre- and post-testing would assess progress in self-understanding.

Curriculum I Component

Dr. Burns (Chairman): Curriculum and Instructions, Dr. Maze, Business and Distributive Education, Dr. Robertson, Art and Music Education, Dr. Johnston Curriculum and Instruction, Mr. La Forge, Library Service, Mr. Haefele, Bureau of Educational Research and Service.

Several distinct self-instruction oriented modules have been designated for completion this year and for inclusion in the sophomore phase of the Pilot Program. The subcommittee charged with defining and developing this component has engaged itself in identifying those basic or core elements which are common requisites to good teaching and professional development. A module is a format incorporating an instructional unit. Students may spend varying lengths of

time working individually toward the achievement of the instructional objectives in the module. To label these modules as self-instruction oriented implies that they will be experimented with primarily in this mode, but that students will be afforded opportunities to interact with each other and with an instructor. This reflects the realization that probably no one vehicle will satisfy most of the students' needs.

As referred to earlier, most of these modules are scheduled for inclusion in the Junior Year Stage. The rate at which individual students move through them and meet the criterion levels of performance will be the only factors determining when any individual student will complete all of them.

The following is a list of the modules thus far reccommended for inclusion in the Curriculum I component (no sequence is implied):

1. Behavioral Objectives
2. Evaluation of Learning
3. Planning for Teaching
4. Organizing for Instruction
5. Curriculum Development and Evaluation
6. Ethical and Professional Behavior
7. Selection and Use of AV Equipment
8. Use of the Library
9. Research Literacy
10. Diagnosing of Learning Difficulties
11. Teaching the Disadvantaged
12. Philosophy of Education

The following outline is an example of one of the modules now under development which includesan excerpt from its proposed objectives, experiences, and activities.

The Behavioral Objectives Module

1. Distinguish between behaviorally and non-behaviorally stated instructional objectives.

2. Convert non-behavioral objectives to a form specifying student post-instructional behayior.

3. Recognition of activities to include in a teaching sequence.

4. Skill in using modified versions of the Taxonomies of Educational Objectives.

5. To distinguish between performance standards used to differentiate achievement of students and those which aid the teacher in judging his own performance.

6. To construct performance standards for objectives in a number of subject fields.

7. Identify two forms of practice - equivalent and analogous practice - and to generate appropriate practice activities.

8. To identify four procedures for promoting perceived purpose.

9. Develop instructional activities incorporating each procedure.

10. To select and construct test items appropriate to given objectives.

11. To design both formal and informal pre-assessment procedures.

12. To make appropriate inferences regarding instruction based on data obtained from the students.

Work remains to be done in all of the above listed modules, The Pilot Program Committee is encouraging more faculty members to become involved in the development and completion of them. The list of modules is not inclusive. If you have thoughts on other units which could be included in the component and wish to engage in their design please contact Donald Haefele.

Curriculum II Component

(No committee designated)

Curriculum II currently incorporates those methods courses presently existing in the ongoing program. The Pilot Program Committee is encouraging faculty members teaching these courses to discuss what new concepts, media, procedures, formats, etc., might be incorporated in them where appropriate. The number of total credit hours required for this component, will range from three for Music Education majors, Physical Education majors, etc., to a total of thirty three for Elementary Education majors. (See Appendix A for further explaination of curricula modifications).

III. Junior Year Stage of The Pilot Program

This level of the Pilot Program encompasses the involvement of the experimental group of students in the Human Learning Component, in those phases of the Curriculum I and Curriculum II Components not yet completed by them and in the continuation of the Self-Concept Component experiences.

An illustration of the Human Learning Component presented earlier in this report expressed the need for involvement of a team approach. A typical team would be composed of methods people, content specialists, educational psychologists, and supervisory specialists who would provide cohesive and meaningful experiences for the students and relate theory and research to direct and relevant application.

Human Learning Component

Dr. Hawk (Chairman): Dr. Williams, and Mr. Edgerly, Department of Educational Psychology, Dr. Wahler, and Dr. Pollio, Department of Psychology.

The Human Learning Component is designed to provide pre-service teachers with an extensive in-depth study and knowledge of the application of basic learning principles. The component is built around the skeletal framework of Robert M. Gagné's hierachical learning model described in his book The Conditions of Learning. Gagné has identified seven basic levels or types of learning according to the pre-conditions necessary for learning to occur on successive levels. Study at each level shall begin in the Human Learning Laboratory. Experiences in the laboratory will be under the direction of a human learning psychologist. These laboratory experiences will entail extensive observation and demonstrations of each type of learning. At the lower levels, both animal and human subjects will be used.

Subsequent to laboratory and supplementary reading experiences, students will attempt to implement the learning principles in simulated teaching situations, micro-teaching situations, and actual classroom settings. As students progress to more cognitive levels of learning, content specialist and specialists in educational methods will become increasingly involved in directing the students' experiences. At every level, students will be working under the direction of an interdisciplinary team. No formal classes will be held. Each student will be involved in individualized study, but responsible to a faculty member while gaining competence at each level of learning. The faculty members working with a student at each level will be responsible for evaluating student competence and recommending advancement to the next level.

IV. Senior Year Stage of The Pilot Program

As mentioned earlier, The Pilot Program Committee has randomly selected another experimental group of twenty seven students to participate in a potential senior sequence of the program this year, 1968-69. This sequence will consist of Analysis of Teaching (fall), Microteaching (winter), and the combined Simulation-Student Teaching Component (spring). This limited one-year study will attempt to evaluate the effectiveness of these individual components as well as the effests of the total sequence on the teaching behavior of the selected students in comparision with a matched control sample. Materials for the Simulation component are prepared for elementary majors only. Therefore, the secondary majors will not be exposed to the Simulation.

Analysis of Teaching Component

Dr. Howard (Chairman): Dr. Terwilliger, Dr. Thurman, and Mr. Blank
Curriculum and Instruction.

This component, as mentioned above, is being offered as a three credit hour course this fall for the senior experimental sample. Dr. French of the Curriculum and Instruction Department will conduct this course.

Background: The interaction analysis system developed by Ned Flanders, now at the University of Michigan, has been demonstrated as an effective research tool for categorizing and describing a teacher's verbal behavior. Research by Flanders in Minnesota, John Hough at Syracuse University, and others, has also shown that pre-service and in-service teacher training in the use of interaction analysis generally induces a consciousness in both groups of how their instructional behavior effects students in teaching situations. Such studies have also demonstrated that delibrate manipulation of verbal behavior on the teacher's part can stimulate commensurate alteration in the student's behavior. The literature implies that such training induces more indirect verbal behavior on the part of the teacher and this, in direct consequence, tends to increase student achievement.

Content: Students will receive training in interaction analysis and related non-verbal techniques.

Objectives:

Students will:

(1) Develop a sufficient cognitive knowledge of interaction analysis and non-verbal techniques.

(2) Categorize, analyze, describe, and evaluate verbal teaching behavior.

(3) Be able to demonstrate certain interaction analysis patterns and/or certain Indirect/Direct ratios.

(4) Have subsequent knowledge of a tool for continuous post-graduate feedback on their teaching behavior and development.

Experience and Activities:

Students will:

(1) Learn the interaction analysis system and non-verbal skills via self-instructional materials and/or the instructor.

(2) Practice category numbering and description.

(3) Tally, develop and produce an analysis matrix.

(4) Produce varied teaching patterns.

(5) Utilize self-feedback media such as audio tape and video tape.

(6) Evaluate their own verbal and non-verbal teaching behavior using interaction analysis and related systems.

Microteaching Component

Microteaching is being offered as a three credit hour course for the senior experimental group. Mr. Roeske from the Department of Curriculum and Instruction and Mr. Haefele from the Bureau of Educational Research and Service, will be managing this course.

Micro-teaching is scaled-down teaching in small groups (3-5 students usually) and class time (ordinarily 5 to 10 minutes). Pre-service students will practice a dozen or more teaching skills on school-age students in nearby schools. Micro-teaching is a logical subsequent extension of methods courses for those instructors wishing to involve their students in this "live" teaching skills development unit.

An investigation of its advantages discloses that Microteaching:

(1) Simplifies the complexities of teaching by isolating specific aspects of teaching.

(2) Provides more appropriate experiences for the beginner.

(3) Permits greater control over practice.

(4) Increases the amount of practice possible within a limited period of time.

(5) Reduces facilities required for training.

(6) Reduces the number of pupils required for training .

(7) Provides good records of teaching performance at periodic intervals under standard conditions.

(8) Permits several judges to evaluate and to re-evaluate a single performance.

Objectives

At the conclusion of the course, students will be expected to have developed some specific skills such as:

(1) Establishing set

(2) Establishing appropriate frames of reference

(3) Achieving closure

(4) Using questions effectively

(5) Recognizing and obtaining attending behavior

(6) Control of participation

(7) Providing feedback

(8) Employing rewards and punishments

Activities: When the trainee engages in a Microteaching lesson in his subject, he will focus upon a specific aspect of teaching, such as one of the above skills, until he has developed a satisfactory minimum level of the skill before he proceeds to another skill. If he does not master the skill in the first lesson, he views his performance on video tape, receives a critique of it, engages in training and tries again, until he is successful.

Simulation Component

Dr. Cruickshank: Bureau of Educational Research and Service

As explained earlier, elementary education students in this Senior Year Stage will spend approximately the first two weeks of their Student Teaching Unit working with Simulation materials. Realistically speaking, the time required to do an adequate treatment of the Simulation component is much more then is allotted here. Therefore, these seniors will not become extensively involved with all of the materials.

The simulation component re-creates the classrooms of Pat Taylor, a new fifth-grade teacher at Longacre Elementary School. Initially, each student assuming the role of Pat Taylor is oriented to the community and school by the superintendent and the building principal. After receiving professional resource materials (cumulative record cards for the class, a curriculum guide, a faculty handbook, and so forth), Pat is engaged in solving 31 teaching problems most commonly reported by first year teachers. The simulation component created by a university staff member, is intended

primarily for elementary education majors. Additional materials will be prepared for prospective teachers of the disadvantaged and junior-senior high teachers.

Objectives

A. As a result of the simulation experience, students will have gone through a simulated orientation to a position as an elementary teacher. They will learn about a school community and a school. In addition, they will be made aware of and learn to use professional materials.

B. Students will be able to solve problems such as: dealing with disruptive student behavior, getting students to do homework, handling children's aggressive behavior toward one another, locating instructional materials, etc.

Student Teaching Component

The Student Teaching Subcommittee is prepared to incorporate several innovative features in this Pilot Program component. A Pass-Fail grading system will be adopted. Student performances will be self-evaluative for the most part, utilizing each student's ability to construct an Interaction Analysis profile on himself to analyze his verbal behavior. Pre- and post-measures, which have previously been proven valid measures will indicate student flexibility scales and reflect the pre-service teacher's amenability to behavior change through the student teaching and microteaching stages.

Future plans include the instituting of an internship program permitting the more competent students to work half-time for half the pay of a regular first year teacher. Seminars, tutorials, and independent study activities will comprise the remaining half-time of the interns.

In summary, the experimental senior sequence to be investigated this year involves the sequence: Analysis of Teaching, Microteaching, and Simulation-Student Teaching. To reiterate, this is a tentative experimental sequence which is amenable to immediate application, and which possesses components judged by the Pilot Program Committee to have direct relevance to the production of effective and sensitive teachers. The particular sequence may be irrelevant and so may be the concern as to whether or not some of these experiences occur in the senior year. Further study will no doubt provide evidence relative to these issues.

V. Continuing Education In Teaching Stage

Professional Development Component

Dr. Mayshark (Chairman): Dr. Kirk, Health, Physical Education, and Recreation, Dr. Hughes, Educational Administration and Supervision.

The objectives of this component focus upon the achievement of continuing professional development of our graduates in education.

Supporting resources from the College of Ducation, including faculty personnel, will be available to first, second, or third year teachers, to enhance their performance and growth as teachers in these early years when it is needed most.

Another concern of this component will be the vehicle it offers as a means of supplying follow-up data on our graduates. Accumulated information from systematic investigation of the strengths and weaknesses of these beginning teachers will be studied for purposes of identifying in what areas we are doing a good job and where we may be in need of improvement. This component reflects a philosophy concerning the need for a continuing assessment and evolution of our teacher education program and for a continuing dialogue and involvement with graduating teachers to facilitate their further professional development.

The Evaluation of The Pilot Program

The over-all evaluation design of the Pilot Program has been developed by Dr. Kennedy from the Bureau of Educational Research and Service. Twelve major sources of experimental invalidity have been minimized or controlled as much as possible through (1) the ulilization of a completely random sampling plan, (2) the utilization of control groups, and (3) the adoption of Random Four - Group Design. Mr. Dietz and Mr. Blank will apply the initial steps of the design in their pre-testing of the freshman experimental group this fall.

If you are further interested in the intricacies of the experimental design, a copy of the docuement explaining it more fully can be obtained from Mr. Haefele.